

CLAIMS

What is claimed is:

- 5 1. A joint mechanism for use in a rod for bearing at least a portion of a user's weight and a corresponding flexible tip for contacting a substantially horizontal surface, the joint mechanism comprising:
 - a spring member having opposed first and second ends;
 - a first bushing adapted for positioning in a hole in an end of the rod and having a
10 cavity adapted to receive the first end of the spring member; and
 - a second bushing adapted for positioning in a hole in the flexible tip and having a cavity adapted to receive the second end of the spring member.

2. The joint mechanism as recited in claim 1, wherein the spring member comprises a coil spring.

3. The joint mechanism as recited in claim 1, wherein when the joint mechanism is installed
5 between the end of the rod and the flexible tip, the spring member flexes longitudinally when a force transmitted by the rod comprises a horizontal component.

4. The joint mechanism as recited in claim 3, wherein the longitudinal flexing of the spring member reduces a mechanical stiffness of the walking aid.

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5. The joint mechanism as recited in claim 3, wherein the longitudinal flexing of the spring member allows the flexible tip to rotate, and wherein the rotating of the flexible tip improves an ability of the flexible tip to grip the substantially horizontal surface.

15 6. The joint mechanism as recited in claim 1, further comprising a dust cover adapted for extending between the end of the rod and the flexible tip and for surrounding portions of the spring member and the first and second bushings.

7. A walking aid comprising:

a rod for bearing at least a portion of a user's weight;

a flexible tip for contacting a substantially horizontal surface; and

a joint mechanism coupled between an end of the rod and the flexible tip and

5 comprising a spring member, wherein the spring member flexes longitudinally

when a force transmitted by the rod comprises a horizontal component.

8. The walking aid as recited in claim 7, wherein the walking aid comprises a crutch.

9. The joint mechanism as recited in claim 7, wherein the spring member comprises a coil spring.

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10. The walking aid as recited in claim 7, wherein the longitudinal flexing of the spring member reduces a mechanical stiffness of the walking aid.

11. The walking aid as recited in claim 7, wherein the longitudinal flexing of the spring member allows the flexible tip to rotate, and wherein the rotating of the flexible tip improves an ability of the flexible tip to grip the horizontal surface.

12. The walking aid as recited in claim 7, wherein the joint mechanism further comprises a first bushing positioned in a hole in the end of the rod, and wherein an end of the spring member is positioned in a cavity of the first bushing.

13. The walking aid as recited in claim 12, wherein the joint mechanism further comprises a second bushing positioned in a hole in the flexible tip, and wherein an opposite end of the spring member is positioned in a cavity of the second bushing.

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14. A crutch, comprising:

a rod for bearing at least a portion of a user's weight;

a flexible tip for contacting a substantially horizontal surface; and

a joint mechanism coupled between an end of the rod and the flexible tip, comprising:

5 a coil spring having opposed first and second ends, wherein the coil spring
flexes longitudinally when a force transmitted by the rod comprises a
horizontal component;

a first bushing positioned in a hole in the end of the rod and having a cavity
adapted to receive the first end of the coil spring; and

10 a second bushing positioned in a hole in the flexible tip and having a cavity
adapted to receive the second end of the coil spring.

15. The crutch as recited in claim 14, wherein the longitudinal flexing of the coil spring reduces a mechanical stiffness of the crutch.

16. The crutch as recited in claim 14, wherein the longitudinal flexing of the coil spring
5 allows the flexible tip to rotate, and wherein the rotating of the flexible tip improves an ability of the flexible tip to grip the horizontal surface.

17. The crutch as recited in claim 14, further comprising a tube and a button lock adjustment mechanism, wherein the rod is positioned inside the tube and adjustably connected to the
10 tube via the button lock adjustment mechanism.

18. The crutch as recited in claim 17, wherein the rod is telescopically extendable from the tube via the button lock adjustment mechanism.

19. The crutch as recited in claim 17, further comprising a pair of rods and an underarm
15 brace, wherein one end of each of the pair of rods is connected to an underside surface of the underarm brace, and wherein an opposite end of each of the pair of rods is connected to the tube.

20. The crutch as recited in claim 19, further comprising a hand grip adjustably connected
20 between the pair of rods.